



CONFERENCE PROGRAMME

MARINHA GRANDE | PORTUGAL
27-28 October 2022

08:30-09:00 Registration

09:15-09:30 Opening Session

9:45-10:45 SESSION D27-M-1

Transforming the civil engineering surveyor

Andrew Evans, Genna Rourke, Ivor Barbrook, Ian Heaphy, Abigail Tomkins, Marek Suchocki, Sangeetha Senthil Kumar and Matt Haigh

Lime mortar with hydraulic properties for 3D printing

Bruno Duarte Dias, Douglas Rocha, Paulina Faria, Sandra S. Lucas, Vitor Silva, Bruno Lobo, and Alberto Reaes Pinto

Comparison of exhaust gas emissions between automatic and human operator excavator

Tanja Kolli, Mikko Hiltunen, Ilpo Niskanen, Pekka Tyni, Matti Immonen and Rauno Heikkilä

Additive manufacturing earth – based composites: strategical & computational methodology for building shell geometries.

Mohamad Hanifa, Bruno Figueiredo and Paulo Mendonça

10:45-11:15 Coffee-Break

11:15-12:15 SESSION D27-M-2

Mountable and demountable construction systems of interior building partitions: ecology and sustainability in the ephemeral use of space

Pedro Jorge and Sérgio Gonçalves

Application of a Prefabricated Wooden Based System for Collective Buildings in a 4-Story Portuguese Building

Marina Tenório, Jorge M. Branco and Sandra M. Silva

Bioretention system: Conception, implementation and instrumentation of three different models in São Paulo – Brazil

Maria Pereira, José Martins, Stephanie Gonzaga and Paulo Pellegrino

A new inclusive housing model for sustainable actions in recycling buildings

Martina Nobili and Eugenio Arbizzani

12:15-13:00 KEYNOTE LECTURE

Digital transformation towards safe and green construction sites

Jochen Teizer

13:00-14:30 LUNCH

14:30-15:00 INVITED SPEAKER

A Twin Transition Approach to Construction – Challenges and Practical Situations

João Moutinho (BUILT CoLAB)

15:00-15:45 **SESSION D27-A-1**

Improving sustainability of building Operation&Maintenance process through Ontologies: an introductory framework.

Francesco Livio Rossini, Gabriele Novembri and Edoardo De Santis

A review of Building Information Modelling applications for disaster resilience assessment

Rossella Marmo, Federica Pascale and Enrico Sicignano

Modeling of behavior of the bending reinforced concrete structures under load

Dzmitry Lazouski, Dzmitry Glukhov, Yahor Lazouski and Artur Hil

15:45-16:15 Coffee-Break

16:15-16:35 **INVITED SPEAKER**

3D Concrete Printer - New tool to help solving affordable housing crisis

Bruno Carlos (Power2Build)

16:35-17:35 **SESSION D27-A-2**

Analysis of the diffusion of BIM in the Brazilian research segment using the Lattes platform

Clézio Júnior, Josyanne Pinto Giesta and Alfredo Costa Neto

Poplar as an alternative species for load bearing structures

Carlos Martins, Cláudio Ferreira, João Negrão and Alfredo M. P. G. Dias

Lightweight concrete for prefabrication partition walls

Emilio Rey Bouzón, Sindy Seara-Paz, Manuel F. Herrador and Miguel Lopez

Geopolymer cement for sustainable construction: a review

Tomás Archer de Carvalho, Florindo Gaspar, Artur Mateus, Ana Marques

20:00

CONFERENCE DINNER

09:30-10:30 **SESSION D28-M-1**

Incorporation of forest biomass-based fly ash in cement for 3D printing

Arpan Joshi, Tomás Archer de Carvalho and Florindo Gaspar

Web Application for Visualizing Emissions Data from Construction Equipment

Lylían M. Andrade and Jochen Teizer

3D Printing For Construction: A Systematic Review Of Its Sustainability

Fernanda Cavatti Simioni, Bárbara Rangel, Nadine Campos and João Teixeira

Digitally enabled quality assessment of in-situ concrete works - A case study from Norway

Halvard Leine Pedersen and Christoph Merschbrock

10:30-11:00 Coffee-Break

11:00-11:45 **KEYNOTE LECTURE**

Digital Fabrication with Sustainable Mineral-bonded Composites

Viktor Mechtcherine

11:45-12:45 **SESSION D28-M-2**

Building Thermal Modelling used in DSF Design Applied in Ventilated Spaces

Eusébio Conceição, João M. Gomes, M^ª Ines Conceição, M^ª Manuela Lúcio and Hazim Awbi

Occupant Three-Dimensional Aero-Thermal Design Using a Coupling Methodology

Eusébio Conceição, M^ª Ines Conceição, João M. Gomes, M^ª Manuela Lúcio, and Hazim Awbi

Impact of automated roof shading on building energy performance in warm & humid climatic places of India

Kuladeep Kumar Sadevi and Avlokita Agrawal

Raising awareness of climate change by building a green roof in Technical university of Kosice's campus

Martina Zelenakova, Maria Hlinkova and Maria Manuela Portela

13:00-14:30 LUNCH

14:30-14:50 **INVITED SPEAKER**

Outlook on Building Management Systems

João Francisco (Avanceesoftware)

14:50-15:35 **SESSION D28-A-1**

Vegetation roofs for sponge cities - a vision from research to practice

Zuzana Vranayová, Alena Vargova, Mariàn Vertal and Katarína Čákyová

Differentiating factors in Customer Experience between offsite manufacturing and conventional construction

David Schafft, Zakaria Dakhli and Mohamed Zaki

Sustainable apartment hotel with autonomous water and electricity systems

Myroslava Horlo and Pavol Purcz

16:05-19:00 **Visit to the Centre for Rapid and Sustainable Product Development (CDRSP)**

19:00-19:15 **Closing Session**

19:15 Farewell Coffee-Break